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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Federal Communications Commission
Office of Secretary

In the Matter of)
)
Rulemaking to Amend Subpart G)
of Part 22 of the)
Commission's Rules Pertaining)
to Commercial Aviation)
Air-to-Ground Service)

RM-9774

JOINT PETITION FOR RULEMAKING

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SUMMARY

GTE Airfone Incorporated, Claircom Licensee Corporation , and In-Flight Phone Corporation (collectively referred to as the "ATG Licensees") jointly petition the Federal Communications Commission ("FCC" or "Commission") to initiate a rulemaking proceeding to modify and clarify its rules governing the commercial aviation air-ground ("ATG") service.

ATG technology and the ATG industry have both enjoyed dramatic growth since the FCC first adopted ATG regulations. Without modifying existing rules, ATG licensees will not be able to utilize improved ground station technology to meet demand for ATG service. The Joint Petition urges the FCC to afford primary status to low power ground stations and to establish streamlined procedures by which ATG carriers may construct and operate low power ground stations. In addition, the proposed rules would allow ATG carriers to utilize low power ground stations to communicate directly with airborne mobile stations in-flight. As a safeguard against interference, the proposed rules establish minimum separation distances between low power stations and between low power stations and ground stations.

The Joint Petition proposes a streamlined procedure for amending ground station and low power ground station coordinates which would increase the speed at which service would be provided to the public. Further, the Joint Petition provides for the establishment of arbitration procedure which has the potential to expedite dispute resolution and thus minimize delays in providing service.

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Background

The rules governing the ATG service were adopted originally in 1990 and are set forth in Subpart G of Part 22 of the FCC's Rules. See Amendment of the Commission's Rules Relative to Allocation of 849-851/894-896 MHz Bands (Report and Order), 5 F.C.C.R. 3861, 3873-74 (1990) ("ATG Order"). When the FCC established the commercial ATG radiotelephone service in 1990, the Commission determined that ATG carriers should share the spectrum allocated to

the new service on an "as available" basis. ATG Order at 3869. Since the ATG Order, ATG technology has improved, and the ATG industry has grown and expanded significantly. These changes necessitate the addition, modification, and clarification of the rules governing the location, construction and operation of ground stations¹ and low power ground stations, as well as the adoption of a new rule to govern the use of fixed channels to test mobile equipment.

On April 4, 1995, various representatives of the ATG Licensees convened in Chicago to discuss legal and technical issues of common interest to the ATG industry. As a result of these discussions, the ATG Licensees propose several rule changes intended to eliminate the need for prior FCC approval for certain proposed low power ground station and ground station operations. Clarification of certain Commission rules and adoption of the proposed requirements also will enable ATG licensees to locate or move certain ground stations to sites more than one mile from the reference coordinates specified in the FCC's Rules and will help expedite the provision of radio telephone service to the flying public.

In addition, the ATG Licensees propose that FCC rules be revised to permit the use of fixed channels currently designated for testing fixed equipment to test mobile equipment. The adoption

¹ The rules governing ATG service authorize ATG licensees to operate ground station transmitters and low power ground station transmitters. Whereas ground station transmitters may operate at a maximum ERP of 100 watts, low power ground station transmitters are limited to a maximum ERP of 1 watt. See Section 22.867(b) and (c).

of the rules proposed by the ATG Licensees will improve ATG service to the general public by minimizing the possibility of service disruptions.

Discussion

I. The Commission Should Clarify Its Rules Governing the Construction and Operation of Low Power Ground Stations

The ATG Licensees propose that Section 22.859 of the Commission's rules be clarified to accord primary status to low power ground stations and to establish co-channel minimum mileage separation requirements between low power ground stations. Furthermore, the ATG Licensees urge the FCC to modify its rules to allow fully spaced and short-spaced low power ground station operations without the need for prior FCC authorization provided all ATG licensees concur to the proposed use. Thus, the ATG Licensees propose that the FCC modify its rules to provide for streamlined procedures by which ATG carriers may construct and operate low power ground stations. To address the possibility of interference caused by the operation of short-spaced low power stations, the proposed rule change provides for a mechanism to address interference. The ATG Licensees also propose clarifying the ATG rules to provide for the use of low power stations to service airborne mobile stations in flight under certain circumstances and to hand-off calls between a ground station and a low power ground station during landing. The proposed revisions to Section 22.859 are set forth in Attachment 1 and are described below.

A. Minimum Separation Between Low and Full Power Ground Stations and Streamlined Procedures for the Construction and Operation of Low Power Ground Stations

Currently, Section 22.859(a) protects ground stations from interference from other low power ground stations by generally requiring a 300-mile separation between low power ground stations and ground stations. It is unclear, however, whether the same interference protection is also extended to low power ground stations. Because the operation of low power ground stations has become just as crucial to the provision of ATG radiotelephone service as the operation of ground stations, new Section 22.859(b) is proposed to explicitly mandate the same minimum 300 mile co-channel communications block separation requirement between any two low power ground stations as that which exists between low power ground stations and ground stations. Thus, low power ground stations will be protected from interference from other low power ground stations to the same extent that ground stations are protected from interference from co-channel low power ground stations.

In addition, because a simple and expeditious procedure for the construction and operation of low power ground stations is desirable, the proposed new Section 22.859 does not require prior FCC approval for the addition or relocation of low power ground stations but requires only FCC notification on FCC Form 489 for any planned construction and operation of a low power ground station, whether or not such operation fully conforms with the minimum separation requirements, provided that written consent of all ATG licensees is secured. In the absence of industry consensus, the proposed Section 22.859(b) provides for a binding arbitration

process. By avoiding the need for regulatory intervention, the arbitration process offers a flexible, yet speedy and cost-efficient mechanism for resolving disputes arising from the construction and operation of low power ground stations.

The proposed rule also provides a mechanism for protecting an ATG licensee who receives interference from a short-spaced low power ground station for which written concurrence has been obtained. Under the approach proposed by the ATG Licensees, the respective parties would be provided 30 days to resolve the situation. If the problem can not be resolved within 30 days, the parties are obligated under the new rule subsection to submit the matter for resolution to binding arbitration or to the Commission.

B. Low Power Ground Station Service to Airborne Mobile Stations on the Ground and in Flight

Although the current Section 22.859(a) permits low power ground stations to provide service to airborne mobile stations on the ground, it is silent on whether such stations may provide service to airborne mobile stations in flight. To promote better and more efficient ATG radiotelephone service, the ATG Licensees propose a new Section 22.859(b)(5), which expressly permits low power ground stations to provide service to airborne mobile stations not only on the ground, but also in flight, as long as the in-flight airborne mobile station is within 80.5 kilometers (50 miles) of the low power ground station.

Under this new section, a call between the low power ground station and the in-flight airborne mobile station must be handed-off to a ground station before the airborne mobile station is more

than 80.5 kilometers from the low power ground station. If hand-off within 80.5 kilometers of the low power ground station is not possible, the call must be terminated immediately. This limitation on the ability of low power ground stations to provide service to airborne mobile stations in flight is intended to minimize the possibility of interference to ground stations. In addition, the new Section 22.859(b)(5) not only expressly requires low power ground stations to hand-off calls to ground stations during take-off, but also permits hand-off back to low power stations during landing.

C. Special Transition Period

In order to provide ATG licensees with a transition period to comply with the hand-off requirement for low power ground stations, the ATG Licensees propose permitting ATG licensees with a transition period until September 1, 1996 to comply with the new requirements of the proposed Section 22.859(b)(5).

D. Primary Status of Low Power Ground Stations

To clarify the status of low power ground stations and ensure that such stations are protected from interference from fully spaced co-channel ground stations and low power ground stations, a new Section 22.859(b)(6) is proposed to affirm the primary status of low power ground stations by generally extending the same regulatory treatment and protection to both low power ground stations and ground stations. Thus, if a low power ground station is located in conformance with the minimum mileage separation requirements of Section 22.859(a) or in conformance with Section

22.859(b); and is used to provide service as authorized in the proposed new Section 22.859(b)(5), it will be protected from interference from other low power ground stations and ground stations.

II. A Streamlined Procedure for Amending Ground Station and Low Power Ground Station Reference Coordinates

Presently, the relocation or addition of a fully-spaced ground station at a location more than one mile from the table of reference coordinates set forth in Section 22.859 could only be accomplished through either a rulemaking proceeding to modify the reference coordinates or a rule waiver. The ATG Licensees propose that the Commission modify its rules to permit ground stations to be relocated to or added at coordinates more than one mile from those specified in the table of coordinates found in Section 22.859. In addition, the rules should be modified to permit authorized low power stations to be added or relocated provided that it is approved by all other ATG licensees. Such relocations should be allowed without seeking prior FCC authorization simply by filing an FCC Form 489, provided that approval from all other ATG licensees is first obtained. See Section 22.859(b)(3) and (c)(3).

These proposed rule changes will provide ATG carriers with a simple and expeditious procedure for relocating existing and adding new fully spaced ground stations and low power ground stations. Under this procedure, fully spaced ground stations and low power ground stations could be rapidly constructed and operated without interfering with other ground stations or low power ground

stations. The rules also will minimize disputes among ATG carriers by affording sufficient notice of the ground station's exact location. Furthermore, in the absence of industry consensus regarding a proposed change in reference coordinates, the proposed Section 22.859(e) provides for the same binding arbitration process proposed for the resolution of disputes regarding the construction and operation of low power ground stations.

III. The Commission Should Adopt a Rule to Permit the Use of Fixed Channels for the Testing of Mobile ATG Equipment

The Commission currently only permits the use of Part 22 mobile channels for the testing of fixed equipment, pursuant to Section 22.381 of the Commission's rules. See 47 C.F.R. § 22.381. However, cellular carriers may use either fixed or mobile channels for testing purposes. See 47 C.F.R. § 22.923. ATG carriers also need the ability to use both fixed and mobile channels to evaluate the performance of equipment. The ATG industry therefore requests that the Commission adopt a new rule to permit ATG carriers to use fixed channels on a secondary basis to test mobile equipment under specific guidelines.

In contrast to other Part 22 carriers, ATG carriers are uniquely responsible for the maintenance of the transmission equipment utilized by both the caller and the licensee. Unfortunately, Section 22.381 currently restricts the use of fixed channels for testing airborne equipment to the laboratory or on the production line. Full end-to-end testing of the equipment cannot be accomplished once it is installed on an aircraft at a location where there is neither a ground station nor a low-power ground

station within range. The inability of ATG carriers to test mobile equipment inhibits final acceptance of aircraft installation and delays the provision of service to consumers.

The establishment of a rule authorizing the use of fixed channels for testing purposes is in the public interest because it will assist the Commission in reducing unnecessary regulatory procedures. Such a rule would allow ATG licensees to test equipment installed on aircraft without requesting experimental or developmental authority from the Commission each time such testing is necessary.

The ATG Licensees request the Commission to add Section 22.877, as set forth in Attachment 2, to permit ATG carriers to use fixed channels for the testing of mobile equipment. The proposed rule change would enhance the ability of ATG carriers to test mobile equipment while assuring interference protection. For example, limiting the output power to 0 dBm EIRP would provide a sufficient signal for testing on the flight line or in a hangar, while simultaneously providing adequate interference protection. In addition, a 50-mile reuse scheme would provide flexibility to service providers while affording all ATG carriers commercial service interference protection.

The proposed rule would allow ATG licensees to test their equipment in real time, more quickly and more often. The more easily equipment can be tested to simulate actual usage conditions, the more ATG carriers can ensure that their systems continue to provide superior ATG service. This will permit ATG carriers to test their equipment after it has left the factory and has been placed in operation in airplanes. Thus, there are clear benefits

to the public from the adoption of the ATG industry's proposed rule to permit the use of fixed channels for the testing of mobile equipment.

Conclusion

For the foregoing reasons, the ATG Licensees request the Commission to initiate a rulemaking proceeding to propose the adoption, clarification and modification of its rules governing the location and operation of, ground stations and low power ground stations. Further, the ATG Licensees request the FCC to propose modifying its rules to allow the use of fixed channels to test mobile equipment. The adoption of the ATG's Licensees' proposals as set forth herein will serve the public interest by facilitating the expeditious provision of ATG service to the flying public and by enabling ATG carriers to enhance the quality of ATG service.

Respectfully submitted,

CLAIRCOM LICENSEE CORPORATION

A handwritten signature in cursive script, reading "Tom W. Davidson", followed by a circled "up" in the upper right corner.

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ATTACHMENT 1

PROPOSED REVISED RULE REGARDING LOW POWER GROUND STATIONS

§ 22.859 Geographical channel block layout.

[Replace current Subsection (a) with the following.]

(a) Except as provided in paragraph (e) of this section, ground station locations must be within 1.61 kilometers (one Mile) of the locations listed in this paragraph. Except as provided in paragraph (b) of this Section, a low power ground station location must be within 1.61 kilometers (1 mile) from reference coordinates. The channel block allotted for each location must be used to provide service to airborne mobile stations in all instances for ground stations and pursuant to this paragraph and paragraph (b) (5) for low power ground stations.

(b) Carriers authorized to construct and operate air-ground radiotelephone systems on the channels listed in § 22.857 may construct and operate low power ground stations.

(1) The antenna location of each low power ground station may be located anywhere that is at least 483 kilometers (300 miles) from all antenna locations of ground stations using the same channel block(s) located in accordance with the geographical channel block layout or with paragraph (d) of this section; and

(2) The antenna location of each low power ground station may be located anywhere that is at least 483

kilometers (300 miles) from other low power ground stations employing the same channel block.

(3) All operating commercial aviation air-ground licensees may, upon unanimous written concurrence and without prior authorization from the FCC, agree to specify a location for the construction of a low power ground station that is less than the minimum separation distance specified in § 22.859(b)(1) and § 22.859(b)(2), from a ground station or low power ground station that is existing or pending before the FCC. The parties shall notify the FCC of the concurrence by filing FCC Form 489.

(i) If after concurrences are exchanged, any party to the concurrence experiences interference, the parties will, in good faith, endeavor to resolve the situation. If the parties cannot resolve the matter within 30 days, the parties shall either submit the matter to the FCC or to binding arbitration.

(4) In the event that one or more operating commercial aviation air-ground licensees do not consent to the construction and operation of a low power ground station proposed under this Subsection (b), the proponent of the low power ground station may either: -

(i) file a Form 600 requesting Federal Communications Commission authorization to construct said facility; or

(ii) submit the matter to binding arbitration. The ATG licensees shall, prior to the first arbitration, unanimously adopt arbitration procedures. The unsuccessful arbitrating party shall pay the entire cost of the arbitration, including, but not limited to, attorney's fees, arbitrator's fees and costs unless unanimous written agreement to do otherwise is obtained from the ATG licensees prior to the submission of the dispute to arbitration.

(5) Low power ground stations may provide service to airborne mobile stations on the ground and to airborne mobile stations in flight, provided that the call between the low power ground station and the airborne mobile station in flight is handed off to a ground station before the airborne mobile station is more than 80.5 kilometers (50 miles) from the low power ground station. If the call is not handed off to a ground station by the time that the airborne mobile station is 80.5 kilometers (50 miles) from the low power ground station, the call must be terminated immediately. During the landing of a commercial aviation aircraft, a call between a ground station and the airborne mobile station may be handed off

from the ground station to a low power ground station. Current licensees are provided until September 1, 1996, to comply with the requirements of paragraph 22.859(b)(5).

(6) Unless otherwise specified in these rules, low power ground stations are accorded primary status and are treated on the same basis as ground stations that are authorized and operating in accordance with the geographical channel block layout or with paragraph (c) of this section.

[Replace Subsection 22.859(b) with the following Subsection 22.859(c).]

(c) Carriers authorized to construct and operate air-ground radiotelephone systems on the channels listed in Section 22.857 may construct and operate ground stations in accordance herewith.

(1) The antenna location of each ground station may be located anywhere that is at least 885 kilometers (550 miles) from all antenna locations of ground stations using the same channel block(s) located in accordance with the geographical channel block layout or with this section; and

(2) The antenna location of each ground station may be located anywhere that is at least 483 kilometers (300

miles) from low power ground stations employing the same channel block.

(3) All operating commercial aviation air-ground licensees may, upon unanimous written concurrence and without prior authorization from the FCC, agree to specify a location for the construction of ground stations that is less than the minimum separation distance specified in § 22.859(c)(1) and § 22.859(c)(2), from a ground station or low power ground station that is existing or pending before the Commission. The parties shall notify the FCC of the concurrence by filing FCC Form 489.

(i) If after concurrences are exchanged, any party to the concurrence experiences interference, the parties will, in good faith, endeavor to resolve the situation. If the parties cannot resolve the matter within 30 days, the parties shall either submit the matter to the FCC or to binding arbitration.

(4) In the event that one or more operating commercial aviation air-ground licensees do not consent to the construction and operation of a ground station proposed under this Subsection (c), the proponent of the ground station may either:

(i) file a Form 600 requesting Federal Communications Commission authorization to construct said facility; or

(ii) submit the matter to binding arbitration. The ATG licensees shall, prior to the first arbitration, unanimously adopt arbitration procedures. The unsuccessful arbitrating party shall pay the entire cost of the arbitration, including, but not limited to, attorney's fees, arbitrator's fees and costs unless unanimous written agreement to do otherwise is obtained from the ATG licensees prior to the submission of the dispute to arbitration.

(d) No prior authorization from the Federal Communications Commission is required to construct and operate a ground station meeting the requirements of §22.859(c)(1) and §22.859(c)(2) or a low power ground station meeting the requirements of §22.859(b)(1) and §22.859(b)(2) provided that all other operating commercial aviation air ground licensees consent in writing to the proposed ground station or low power ground station. If unanimous consent is obtained as required, a Form 489 shall be filed. In those instances where unanimous consent is a pre-requisite for filing a Form 489, and such consent is not given, the licensee may file a Form 600 requesting authorization to construct said facility. Construction of ground stations and low power ground stations may

commence after receipt of unanimous written consent from all other operating commercial aviation ground licensees.

[Add the following Subsection (e).]

(e) Licensees of channels listed in § 22.857 may, with the written approval of all other commercial aviation air-ground licensees, change the ground station reference coordinates contained in this section to accurately reflect the exact ground station location or effect a move of a ground station location, as long as the new reference coordinates comply with either the separation requirements of § 22.859(a) or § 22.859(c). In addition, low power ground station reference coordinates may be changed with the written approval of all other commercial aviation air-ground licensees to reflect the exact low power ground station location or to effect a move of a low power ground station location, as long as the new reference coordinates comply with either 22.859(a) or (b). Licensees shall notify the FCC of such changes by the filing of an FCC Form 489. All other commercial aviation air-ground licensees shall be provided copies of such Form 489 filings. In the event that one or more operating commercial aviation air-ground licensees timely object in writing to the proposed change in reference coordinates. The proponent of the change in reference coordinates may file a Form 600 requesting Federal Communications Commission authorization, or submit the matter to binding arbitration, as set forth in paragraphs 22.859(b)(4) and 22.859(c)(4).

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ATTACHMENT 2

PROPOSED RULE FOR THE USE OF FIXED CHANNELS TO TEST MOBILE ATG EQUIPMENT

[Add the following Section 22.877 to Subpart G.]

§ 22.877 Commercial Aviation Air-Ground Auxiliary Test Transmitters

Auxiliary test transmitters may be used on a secondary basis for testing the performance of both fixed and mobile equipment located remotely from the control point. Auxiliary test transmitters may transmit on channels designated for mobile or fixed transmitters, subject to the following conditions:

a) Output Power - The EIRP of ground station channels used for testing must not exceed 0 dBm EIRP;

b) Channel Reuse - Commercial aviation air-ground carriers shall not use any channel block for testing purposes at a transmitter site located within 50 miles of a location where the channel is being used to provide commercial aviation air-ground service; and

c) Operating Constraints - Carriers must also abide by the following operating constraints:

i) Channel blocks used for testing may only be used to test aircraft situated on an airport tarmac or hangar area.

ii) Use of test channel blocks is permitted at itinerant locations on an intermittent basis, as required.

iii) Carriers shall only use their own FCC assigned and authorized pilot channels for test purposes.

iv) Use of test channels is governed by the same free channel criterion employed in § 22.865(a).